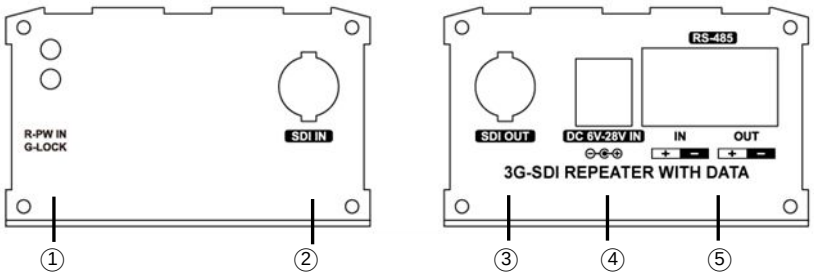
3G-SDI REPEATER WITH DATA USER MANUAL

MODEL: 15-SR101

1. Key Features

- **Supports high-definition HD-SDI digital video at 720p60, 1080i60 and 1080p30 formats at all frame rates.**
- **Supports HD-SDI signals at data rates up to 3G-SDI video.**
- **Passes embedded audio, ancillary ID, metadata information.**
- **A data signal (RS-485) and Power can be transmitted from DVR side to camera over coax cable.**
- **Up to 5 repeaters may be powered from the DVR side to the camera over the coax cable.**
- **Automatic input equalization improves signal transmission distances.**
- **Automatically adapts to SMPTE and ITU digital video standard formats.**

2. Panel View



①. POWER IN, HD-SDI SIGNAL LOCKED and POWER OUTPUT LEDs
②. HD-SDI INPUT
③. HD-SDI OUTPUT
④. POWER INPUT
⑤. RS-485 I/O

3. Caution for Installation

3.1 Be careful; never let any water in this equipment.
3.2 If necessary, use a soft cloth moistened with alcohol to wipe off the dust.
3.3 Be extra careful not to shake the unit.
3.4 Avoid places where temperatures exceed 50℃ or higher.
3.5 Avoid places where there are frequent vibrations or shocks. When any abnormalities occur, make sure to unplug the unit and contact your local dealer.

4. Cable Installation

4.1 The coaxial cable is not squeezed at any position and the maximum bending radius defined by the cable manufacturer should be considered.

4.2 Bending creates pressure on the center conductor, causing it to move through the dielectric toward the inside of the bend. It would be caused to the impedance matching and return loss (signal reflection) problems, then reduces the maximum possible cable length and signal quality and reliability.

4.3 Avoid any BNC - adapter or any connectors in the BNC cable. Looping HD-SDI signals by BNC T-connectors to other devices is not possible.

5. Packing

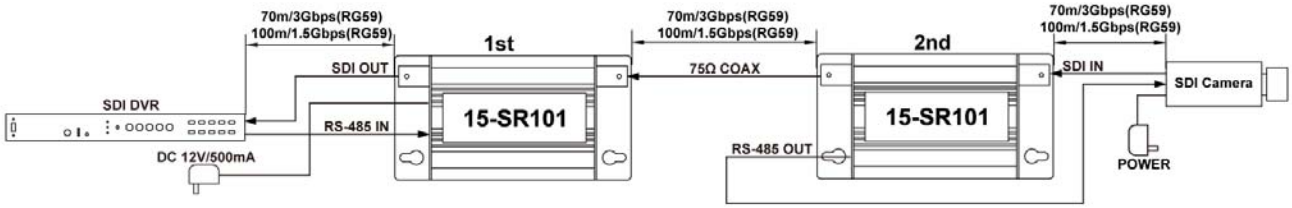
5.1 3G-SDI Repeater	×1	
5.2 User Manual	×1	
5.3 Screws	×4	
5.4 Plastic-Conical-Anchor	×4	
5.5 Power Adaptor	×1	[Option]

6. Specification

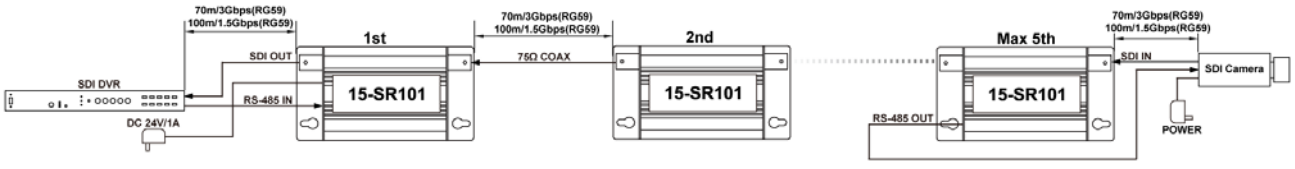
3G-SDI	
Gain	Unity
Signal Formats	SD-SDI,HD-SDI, and 3G-SDI digital component video
Input Data Rata	270Mbps /1.485Gbps / 2.97Gbps
Min. Input Level	0.5Vp-p
Max. Input Level	1.2Vp-p
Output Level	0.8Vp-p typical
Distance	**■1.485Gbps:** 170 m (550') using RG6 cable 120 m (400') using RG59 cable **■2.970Gbps:** 100 m (330') using RG6 cable 70 m (230') using RG59 cable
Auto data rate detection	Yes
Impedance	75Ω
Input Connector	BNC × 1
Output Connector	BNC × 1
Data (RS-485)	
Data Rate	Up to 5Mbps
Data Up-link Input	2-wire RS485 IN
Data Up-link Output	2-wire RS485 OUT
Input Connector	2P Terminal Block / Pitch 5.0mm × 1
Output Connector	2P Terminal Block / Pitch 5.0mm × 1
Indicators	
Red LED	Power On
Green LED	HD-SDI Input Locked
Power	
Input Voltage	6~28 VDC
Input Current	<70 mA @ 12 VDC
Input Connector	DC-JACK OD:2.0mm
Mechanical & Environmental	
Weight	< 170g (5.46 oz)
Dimensions (W × L × H)	61 × 116 × 37 mm (2.40” × 4.57” × 1.45”)
Operation Temperature	-10°C ~ 50°C
Storage Temperature	-30°C ~ 85°C

7. Connection Diagram

Application #1:

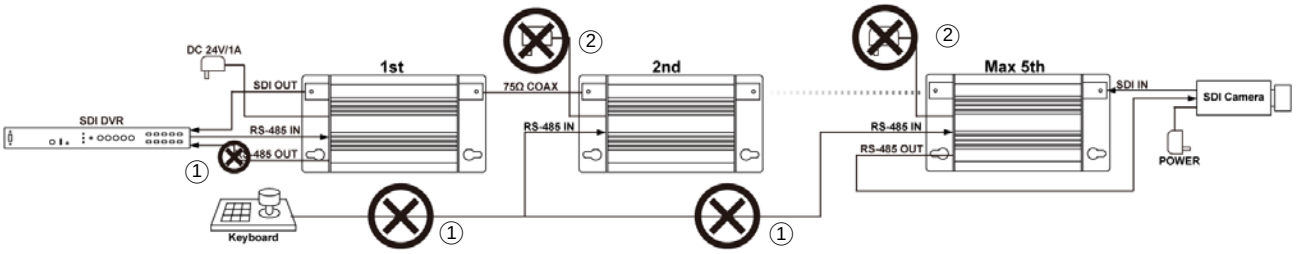


Application #2:



Note: It will reduce the 10% of the SDI link distance when the RS-485 I/O working. Please follow the link distance of the above connection diagram indication.

8. Connection Notice



① For every repeater units, either "**RS-485 IN**" or "**RS-485 OUT**" could be used at the same time. The 1st repeater side must carried the control signals form the DVR side, so the "**RS-485 IN**" port be used, and the other repeater must forward the control signal to camera, so the only "**RS-485 OUT**" port could be used.

② The 1st repeater must be connected to AC-DC power adaptor, then it can transmit the power over the coaxial cable for others repeater used.